G
963
M52
A3
2

STATISTICAL BULLETIN
METROPOLITAN LIFE INSURANCE COMPANY

VOLUME 22 NOVEMBER · 1941 NUMBER 11

A Lesson in Optimism

SUCH have been the successes of modern medicine and public health, in the last few decades, that the results have excelled even the most sanguine expectations of the leaders in the field. Life tables, constructed not on actual mortality but on what 20 years ago seemed the best results attainable, have since been not only equalled but surpassed by experience.

An examination of two such hypothetical tables prepared in the Statistical Bureau of the Metropolitan Life Insurance Company in 1922 and in 1933 provides an object lesson in optimism. It shows us where our expectations for improvement in mortality have proved to be too conservative, and also where these expectations have yet to be realized. These early hypothetical tables are shown on page 3. In addition, there is also set forth a new hypothetical table prepared this year, together with recently computed life tables on the basis of actual experience, for New Zealand, 1935-1937, and for the United States, 1930-1939.

When the first hypothetical life table was prepared in 1922, the reductions assumed from the prevailing mortality of that period were considered to be material, but not radical. The resulting expectation of life at birth came to 64.75 years, at a time when the actual figure for the United States was under 58 years. Mortality in the first year of life was assumed as 38.21 per 1,000; at age 1, as 10 per 1,000; and at age 10, as 1.14 per 1,000. The table expressed "the best mortality we may hope for with our present knowledge and in the light of our actual achievements."* No time was specified when this hypothetical table might materialize, but, as events proved, the waiting period was not long.

It has come as a distinct, but most pleasant, surprise to find that the figures for expectation of life in the hypothetical table of 1922 are practically duplicated, age by age, in a life table recently issued by the Census Bureau for the period 1930-1939, based upon the experience of white females in the general population of the United States. The agreement is quite remarkable, as may be seen by a comparison of the figures for expectation of life in the

*L. I. Dublin, "The Possibility of Extending Human Life," Harvey Lecture, New York Academy of Medicine, 1922.

table on page 3. Only at age 70 does the divergence amount to as much as one year; up through age 50, the differences are less than 0.3 year. When a comparison is made, not of the expectation of life but of the mortality rates in these two life tables, it is found that, except for the first year of life and at ages 50 and 60, the actual death rates for white females in 1930-1939 proved to be lower than in the hypothetical table of 1922. Thus, have the hopes of the hypothetical table been not merely realized, but surpassed, by actual experience—and all this within two decades.

In the early years of the last decade it was already evident that the goal set by the hypothetical life table of 1922 would soon be reached. Accordingly, another hypothetical table was prepared in 1933‡, which was based essentially upon certain assumed reductions from the mortality for New Zealand females in 1931. At no age was the reduction more than 15 percent. The expectation of life at birth for the new hypothetical life table was 69.93 years, as against 67.88 years according to the New Zealand life table used as basis.

Again it was not long before actual experiences emerged which surpassed the new hypothetical table in some respects. Mortality rates better than those of the new hypothetical table were found at most ages under 40 years in a recently computed life table for New Zealand females of 1935-1937. The data are set forth in the lower tier of the table. In this experience, the goal set by the hypothetical life table of 1933 was surpassed in adolescence and early maturity, but not attained in infancy, late maturity, and old age. The figures for expectation of life actually achieved and shown in the life table for New Zealand females, 1935-1937, were at most ages about one year less than those forecast in the hypothetical table of 1933. We have reason to believe that when all the data from our 1940 census are in, it will be found that large sections of this country, principally in the Midwest, have mortalities as favorable as those of New Zealand.

In the light of this situation, the hypothetical life table of 1933 has again been revised in certain respects. For the revised table, the mortality rates from ages 1 to 40 were reduced by 20 percent from those observed for New Zealand females in 1935-1937. Graded percentage reductions were used for ages from 41 to 49. For the first year of life, and at ages 50 and over, the mortality rates of the hypothetical table of 1933 were retained. The latest hypothetical table yields an expectation of life at birth of 70.78 years—not quite one year greater than that found in 1933 and somewhat more than two years above that for New Zealand females in 1935-1937, for whom the figure was 68.63 years.

It may not be very long before an experience will develop with mortality rates at some ages as favorable as those of the revised hypothetical table. However, this is much more

‡L. I. Dublin and A. J. Lotka, "Length of Life," Ronald Press, 1936. page 191.

likely to occur, in the near future, at any rate, at the younger ages than at the older ones. So far, mortality at the older ages has been generally intractable. There is, however, some room for optimism even here, for geriatrics— the study of the diseases of old age—has lately become the subject of concentrated study, and there is every reason to believe that such continued efforts will bring results even in this difficult field of medicine.

The fact that certain segments of

Expectation of Life and Mortality Rates in Several Hypothetical Life Tables Compared with the United States, 1930–1939 and New Zealand, 1935–1937

Age	Hypothetical Life Tables Prepared* in			United States (White) 1930–1939†		New Zealand 1935–1937*	
	1941	1933	1922	Males	Females	Males	Females
	Expectation of Life						
0	70.78	69.93	64.75	60.6	64.5	65.87	68.63
1	71.58	70.71	66.30	63.3	66.6	67.28	69.65
2	70.81	69.95	65.97	62.8	66.0	66.60	68.93
3	69.93	69.09	65.24	62.0	65.3	65.78	68.08
4	69.02	68.22	64.42	61.2	64.4	64.93	67.19
5	68.10	67.34	63.57	60.4	63.6	64.03	66.28
10	63.36	62.67	59.02	55.9	59.0	59.37	61.60
20	53.78	53.21	49.82	46.8	49.7	50.09	52.12
30	44.57	44.23	41.06	38.1	40.9	41.13	43.07
40	35.45	35.41	32.49	29.6	32.2	32.18	34.13
50	26.69	26.69	24.08	21.7	24.0	23.78	25.54
60	18.55	18.55	16.01	14.9	16.4	16.19	17.58
70	11.60	11.60	9.17	9.3	10.2	9.98	10.86
80	6.38	6.38	5.29	5.3	5.8	5.52	5.99
	Mortality Rate per 1,000						
0	25.00	25.00	38.21	57.0	45.0	35.53	28.79
1	3.17	3.34	10.00	8.1	7.2	4.78	3.96
2	1.73	1.97	4.20	4.2	3.6	2.68	2.16
3	1.32	1.82	2.80	2.9	2.6	2.35	1.65
4	1.13	1.73	2.25	2.3	2.0	1.53	1.41
5	.99	1.50	1.85	2.0	1.7	1.20	1.24
10	.55	.56	1.14	1.4	1.0	.90	.69
20	1.26	1.61	2.34	2.7	2.2	2.17	1.58
30	1.97	2.80	3.26	3.5	3.1	2.18	2.46
40	2.81	3.15	4.70	6.1	4.6	4.25	3.51
50	5.80	5.80	7.19	12.4	8.9	8.33	6.65
60	13.83	13.83	14.29	25.7	19.0	19.52	14.86
70	32.69	32.69	56.45	56.3	45.8	46.76	39.02
80	91.15	91.15	130.28	127.0	112.6	116.01	105.71

*Prepared in the Statistical Bureau of the Metropolitan Life Insurance Company.
†Prepared by the United States Bureau of the Census.

our population can even now achieve the low levels of mortality set by hypothetical life tables designed to represent optimum conditions is encouraging. It shows, quite beyond question, that we know enough even now of medical and sanitary science to raise the general average length of life to 70 years. Beyond that point, we must wait for the solution of such medical mysteries as the cause of cancer, of hypertension, and of other aspects of physical deterioration with advancing age.

Why Married People Live Longer

AMONG males in the essentially productive ages of life, the death rate among the single or widowed is about double that among the married, according to statistics for New York State, exclusive of New York City, for the years 1929 to 1931.* At age 40, for instance, the actual rates were 6.08 per 1,000 among the married, 12.84 among the single, and 13.16 among the widowed. Among the females, there was a similar but much smaller differential. At age 40, married women had a death rate of 5.34 per 1,000, as against 6.07 among the single and 6.70 among the widowed.

Unfortunately, mortality data of this kind are altogether too scanty in the literature; data relating to the United States as a whole, with classification by marital status, are not available at all. Still more difficult is it to obtain any information regarding mortality by cause among persons of different marital status, just the information which we would need to throw further light on the broad and socially significant observation that mortality is so much higher among the single and widowed than among the married.

However much one would like to know what are the harmful causes which concentrate their effect upon single and widowed persons, published official statistics give us no help in this direction. Our own experience among Metropolitan policyholders also can give us no *direct* information on the subject, for although we know the marital status of the policyholders at death, we do not know the marital status of all our living policyholders, who would form the denominator in the quotient representing the mortality rate. We are not, however, quite helpless. Indirectly we can throw light on our problem, as shown by the following example, in which we may assume that among our Industrial policyholders the death rate among the single is about twice that among the married, as was found to be the case for the State of New York. In our Industrial experience, tuberculosis accounted for 19.1 percent of all deaths among the single males at ages 20-44, but only for 11.4 percent of the deaths among the married. The ratio of mortality among the single in this age group to the mortality among the married

*See STATISTICAL BULLETIN, February 1937, page 7. The latest data available relate to the period 1929-1931.

is, therefore, about 38.2 to 11.4, or well over three to one. We have thus indirectly obtained a very striking measure of the great preponderance of deaths from this disease among the single, as compared with the married. It is true that from these figures alone one might surmise that the excess mortality among the single might be due to a species of self-selection, persons afflicted with or predisposed to tuberculosis being thereby restrained, consciously or unconsciously, from marriage. But that this is not the sole reason for the higher mortality among the single than among the married is shown by the corresponding figure for the widowed. Among these, the proportion of deaths from tuberculosis is even higher than among the single, namely 23.1 percent. Since these widowed persons had been married at one time, the question of any self-selection against marriage is ruled out in their case. It may also be noted in the table on page 6 that a similar situation, though in less marked degree, is found at ages 45 to 74; the story for females is about the same as for males.

Alcoholism, particularly among males, is another circumstance which affects very differently the single and widowed on the one hand, and the married on the other. Here we find that 1.4 percent of all deaths at ages 20 to 44 among the single and 1.0 percent among the widowed were attributed to alcoholism, while for the married it was only 0.6 percent. Males of older ages and females show the same characteristics. Although the figures are small, the differences according to marital status are material. In this connection it is pertinent to note also that both the single and widowed males have a greater proportion of deaths from cirrhosis of the liver than the married males.

The figures for accidents bear out the perhaps natural supposition that persons living alone are more inclined to take serious risks than those who have family attachments. In every category but one—single males of ages 20 to 44—the proportion of all deaths ascribed to accidents was lowest among the married. Curiously enough, the figure was highest for widowed males of ages 20 to 44, where 22.0 percent of all deaths were due to accidents. As a matter of fact, tuberculosis and accidents taken together account for almost one half of the deaths in this group.

In addition to being more prone to accidental deaths, the widowed are more likely to resort to suicide than the married. For example, among widowed males of ages 20 to 44, suicide accounted for 8.9 percent of all deaths, but only 4.9 percent for married men of the same ages. It would seem that the companionship and responsibilities of family life strengthen the will to live when seemingly unsurmountable problems present themselves.

Syphilis likewise takes proportionately a much greater toll among the older groups of the single or widowed than among the married. Thus, in the case of males at ages 45 to 74, this cause resulted in 2.1

percent of all deaths among the single, 1.6 percent among the widowed, but only 1.2 percent among the married. In the case of females, the figures for the widows were in excess at all ages.

Among the other diseases or conditions which show characteristic differences in regard to marital status may be mentioned influenza and pneumonia. Here, the single and widowed of ages 45 to 74 are at some disadvantage when compared with the married. Most of the other causes of death listed in the accompanying table exhibit no features calling for special comment, since the differences in percentages according to marital status are not striking or follow no consistent pattern. It is noteworthy that the important diseases which are largely noninfectious in origin do not show marked differences in the proportions of death in favor of the married over the single or widowed. Cancer, the cardiovascular diseases, and nephritis may be cited as examples.

Percent Distribution of Deaths from the Principal Causes According to Sex, Age[1], and Marital Status at Death (Whites Only) Weekly Premium-Paying Business, Industrial Department, 1937–1939 Metropolitan Life Insurance Company

Cause of Death	White Males						White Females					
	Single		Married		Widowed		Single		Married		Widowed	
	20-44	45-74	20-44	45-74	20-44	45-74	20-44	45-74	20-44	45-74	20-44	45-74
All Causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Influenza and pneumonia (all forms)	8.0	7.0	9.0	6.2	6.3	7.0	7.9	6.9	7.3	5.2	7.2	5.7
Tuberculosis (all forms)	19.1	5.9	11.4	3.8	23.1	4.9	23.1	2.6	12.2	1.8	19.1	2.2
Syphilis	1.6	2.1	1.6	1.2	1.5	1.6	.8	.4	1.0	.5	3.5	.6
Cancer	4.0	12.3	5.7	14.9	2.3	13.3	11.4	20.2	13.5	19.4	13.5	18.1
Alcoholism	1.4	.7	.6	.2	1.0	.4	.2	[3]	.1	[3]	.4	.1
Select cardiovascular[2] diseases	17.9	43.1	19.3	44.6	16.3	44.0	19.4	42.9	16.8	41.2	14.2	43.2
Cirrhosis of liver	1.5	1.8	1.3	1.6	1.4	1.8	.6	.5	.9	1.1	1.2	1.0
Nephritis	4.0	7.0	4.2	7.2	3.4	6.9	4.9	8.4	5.3	8.4	4.6	8.3
Suicides	4.0	1.5	4.9	1.5	8.9	1.7	2.4	.6	2.3	.6	4.3	.7
Accidents—total	17.9	6.8	20.9	5.0	22.0	6.4	5.0	4.0	4.2	2.6	5.0	3.1
Motor vehicle accidents	8.2	2.7	9.8	1.9	11.2	2.4	2.5	.9	2.4	.8	2.2	.9
All other causes of death	20.6	11.8	21.1	13.8	13.8	12.0	24.3	13.5	36.4	19.2	27.0	17.0

[1] The percentages have been standardized from corresponding data for quinquennial age groups on the basis of total white deaths from all causes in this experience.

[2] Includes cerebral hemorrhage, coronary diseases, angina pectoris, arteriosclerosis, and "other diseases of the heart."

[3] Less than 0.05.

The mortality pictured according to marital status set forth here is suggestive, even if not wholly conclusive. It is hard to believe that the favorable mortality from tuberculosis, accidents, suicide, and such social conditions as alcoholism and syphilis for the married does not arise, directly or indirectly, as a benefit accruing from a normal family life. We must acknowledge, however, that the factor of selection is also operative: that married people are on the whole a better group physically because they tend to exclude those with asocial habits and those suffering from serious impairments or chronic diseases.

Danger of a Typhus Epidemic in Europe

THE ravages of typhus fever during the World War, and the civil disturbances following it, form a classic but grim chapter in the history of epidemics. How many succumbed to typhus then can never be known at all accurately because of the utter breakdown of whatever health and statistical services existed in the countries through which this disease swept. As early as 1915 Serbia experienced an epidemic that took hundreds of thousands of lives of her citizens and of Austrian prisoners of war. So severe was this outbreak that an Austrian offensive against the country was reported to have been delayed largely on its account. Later, with the military operations in Russian territories and some Balkan countries, typhus fever, normally endemic there, increased rapidly. Eventually the disease spread like wildfire through many parts of eastern Europe. Populations were exhausted by famine and the hardships of foreign and civil wars. The means to fight the disease were almost wholly lacking. As a result, Russia alone, during 1917-1921, is said to have lost 2,500,000 to 3,000,000 lives. This is a conservative estimate.

There are grave fears that the frightful losses of life from typhus will be repeated in the present war. One after another the areas through which the disease swept a generation ago have now been drawn into the conflict, and many of the conditions which prepared the way for the spread of the disease then are now being duplicated. The "scorched earth" policy of the Russians is one such condition, because probably only a fraction of the population of the invaded section of Russia were evacuated. Even if the Russians have been unable to carry out, to the limit, the policy of destroying or removing food and fuel supplies, the commandeering of such supplies by the German authorities in occupied areas has made desperate a situation that was already grave. The cruel conditions now existing in eastern European countries are ideal for the spread of a typhus epidemic.

So far, in certain parts of eastern and southeast Europe, typhus has remained under some measure of control during the current conflict,

according to data collected by the League of Nations and the United States Public Health Service. Unfortunately, however, for most localities in this region—many of which normally harbor typhus—no data are available since their recent invasion. Even in some countries which are still nominally independent, the quality of the data has deteriorated with the disruption of civil health services. Transfers of territory and interchanges of population have also contributed to this situation.

From the facts which are available for a few countries, the signs are ominous, although the total number of cases is as yet relatively small—still in the hundreds or thousands where records exist, as compared with the huge figures of the last war and the postwar period. Thus, many cases of typhus have occurred in areas of Poland annexed by Germany which formerly were almost entirely free from the disease. The number of cases in this region rose tenfold in 1940 above the numbers for 1938 and 1939 and, as of the latest date in 1941, the number has again been trebled over the figure for 1940. Some cases have appeared in Germany itself and in other areas seized by her in 1938-1939. Whether these cases are limited to persons from the invaded areas, who are now working in Germany, is unknown. In the other parts of Poland, in some of which the disease was normally endemic, and which have been overrun by armies in two successive years, conditions of life have been rendered so bad that typhus has certainly increased and is likely to rise at an accelerated pace.

The same circumstances in varying degree exist in the whole combat area of eastern Europe, stretching from the Baltic to the Black Sea. Particularly in Lithuania and parts of western Russia, numerous cases of typhus occur every year, although since 1937 no data at all have been given out by Russia, and data for areas taken over by Russia ceased with their annexation. In Russia, more than 40,000 cases of typhus were recorded in 1936, the last full year for which such data are available. The disease is normally present in several other territories that have been transferred in the political upheavals of the past few years, some of which, like Bessarabia, have also been the scene of military operations. In the territory acquired by Hungary from Czechoslovakia, the frequency of typhus rose approximately fourfold in 1940, and the latest data in 1941 show a 50-percent increase over 1940. In the section of Transylvania transferred to Hungary from Rumania, an even greater rise has occurred. In Rumania (as constituted in January 1941), the frequency of the disease in 1940 was somewhat above normal, and rose rather sharply in the first half of 1941. The political turmoil in Rumania has been so continuous in the last two or three years, that doubt may be expressed as to the validity of the statistics for that country, and the situation is

probably worse than appears from the statistics.

In Bulgaria typhus did not rise in recent years much above prewar levels until the first part of 1941, when the incidence practically doubled over 1940. In Yugoslavia, the facts are available only for the first two months of the year, prior to its invasion. Conditions in that unhappy country now are so bad that the outlook is rather grim.

A fresh reminder of the perils from typhus resulting from war conditions is the recent experience of Spain. The civil war and its aftermath left that country impoverished and exhausted. Normal processes of reconstruction have been hindered as a result of the impact of the European war on the country. Because of this, and because of special circumstances created by the conflict itself, Spain, which is normally free from the disease, has suffered a severe outbreak, with the number of cases exceeding 8,000 during the first eight months of 1941.

Typhus looms as a dark menace over all of eastern and southeastern Europe in territories harboring a prewar population of 125,000,000 peoples. The tragedy of typhus is that it is perfectly controllable by comparatively simple sanitary measures. But the great bulk of the people in these areas, who live, even in the best of times, at little above a subsistence level, have been reduced much below that level. In addition to serious shortages of food, fuel, and clothing, there has been destruction of houses and transportation facilities on an enormous scale. These circumstances, together with overcrowding and with the apathy engendered by famine and tyranny on the populations affected, make them a prey to the rapid spread of typhus.

While modern science has developed special methods of fighting the disease, particularly in the way of new vaccines, the chances of application of these remedies in the war-torn areas of eastern Europe are extremely poor. Medical and nursing personnel in these areas, which is normally scant, is grossly inadequate today. Indeed, if in Spain, now at peace, the spread of the epidemic has not been checked, how much less is the prospect for control in the areas directly involved in military operations. Typhus has a fairly well marked seasonal incidence, generally rising rapidly in early winter to a peak in the late winter or early spring. Conditions are such that this winter may well see the beginning of a devastating outbreak of the disease. Civilian and military health authorities may be able to keep it within bounds in some areas, but the prospect of such control does not appear good in much of the affected region. If, moreover, the experience of earlier periods is repeated, the incidence of typhus fever will probably remain for a year or more well above levels prevailing before the present conflict. The basic conditions in eastern Europe which have brought the threat of a typhus outbreak cannot be quickly remedied.

Statistical Information, Please

What is the proportion of stillbirths in the United States?

According to the latest data, for every 1,000 live births, there are 32 stillbirths; of these 18 are males, 14 females. The ratio of stillbirth is much higher than average in the case of multiple births. Among 1,000 pairs of twins there were 74 cases in which one of the twins was stillborn and 41 cases in which both were stillborn.

What is the average length of a generation?

The question permits of different answers, according to the point of view. If we start with a cohort of 100,000 babies just born and trace them through life, we may regard these as one generation, and their average length of life, which according to present conditions is about 63 years, would then be the length of a generation. But generations of this kind overlap, because the replacement of each such generation by children begins while the generation is still in being, and the average interval from mother to daughter is about 28 years, from father to son about 33 years. This is what is usually thought and spoken of as the average length of a generation; in round numbers, there are thus three generations to the century.

What is the average age at marriage?

Only a few States publish data regarding the age at marriage. In New York State (exclusive of New York City) the average age at first marriage has for a number of years past been about 26 years for men and 23 years for women. The average age for second and higher marriages was 46 for males and 40 for females.

In 1939, the last year for which data are available, more first marriages were recorded as taking place at age 21 than at any other age for brides, and at age 24 for bridegrooms. Only 10 percent of the bridegrooms were at ages 39 and older, and among these almost two thirds were marrying for the second time. In the case of the brides, 10 percent were at ages 34 and older, and three fifths of these were entering remarriage.

What is the excess of fatal accidents among the blind?

Accidental deaths among blind persons as a group were 1¾ times the normal, according to a study made by the Metropolitan Life Insurance Company. This excess was not so great, however, as for all causes of death, the total death rate among the blind in this study being 2½ times the normal. The relatively favorable accident record of the blind is due apparently to their sheltered and restricted lives which reduce their exposure to many types of accidents, such as motor vehicle and occupational accidents. Home accidents, however, cause a high toll among blind persons. Only blind females had a higher accident rate than normal females; blind males showed little excess.

The following table shows the mortality among Industrial policyholders for October 1941, September 1941, and October 1940, together with the death rates for the first 10 months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Death Rates per 100,000 Policyholders from Selected Causes. Industrial Department. Weekly Premium-Paying Business*

Causes of Death	Annual Rate per 100,000 Policyholders*				
	October 1941	September 1941	October 1940	Year to Date: End of October	
				1941	1940
All Causes—Total	677.0	652.7	692.6	752.0	763.1
Typhoid fever	0.9	0.1	1.1	0.5	0.7
Measles	.3	.1	.1	.9	.4
Scarlet fever	....	.2	.6	.4	.6
Whooping cough	1.3	1.1	1.2	1.3	1.2
Diphtheria	.7	.8	.6	.6	.7
Influenza	2.1	1.4	2.7	8.4	8.0
Pneumonia (all forms)	19.2	16.8	21.2	31.8	36.2
Tuberculosis (all forms)	37.0	38.5	39.0	43.2	44.5
Tuberculosis of respiratory system	32.5	35.5	34.8	39.3	40.1
Syphilis	10.1	10.3	9.6	11.3	11.4
Cancer (all forms)	94.4	98.8	96.2	103.2	101.6
Diabetes mellitus	22.4	20.8	25.8	27.3	28.9
Cerebral hemorrhage	51.3	53.7	57.9	60.3	60.9
Diseases of the coronary arteries and angina pectoris	49.5	44.2	46.6	53.6	51.4
Other chronic heart diseases†	135.5	125.5	137.8	155.3	157.9
Diarrhea and enteritis	7.7	8.2	6.3	4.7	4.5
Appendicitis	6.2	7.1	7.1	7.5	9.0
Chronic nephritis	45.7	40.1	49.4	51.4	56.1
Puerperal state—total	4.6	4.5	4.2	4.7	4.8
Suicides	7.3	6.6	8.8	7.3	8.4
Homicides	3.8	3.4	3.7	3.6	3.7
Accidents—total	51.5	51.8	47.3	51.0	46.5
Home accidents	9.5	7.5	10.2	10.9	11.5
Motor vehicle accidents	23.1	22.1	20.0	20.5	17.1
All other causes of death	125.4	118.8	125.3	123.5	125.6

*The rates for 1941 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†International List (1940) titles 92, 93 (c), (d), (e), and 95.

Correspondence on the subjects discussed in these Bulletins may be addressed to: The Editor,

Statistical Bulletin,

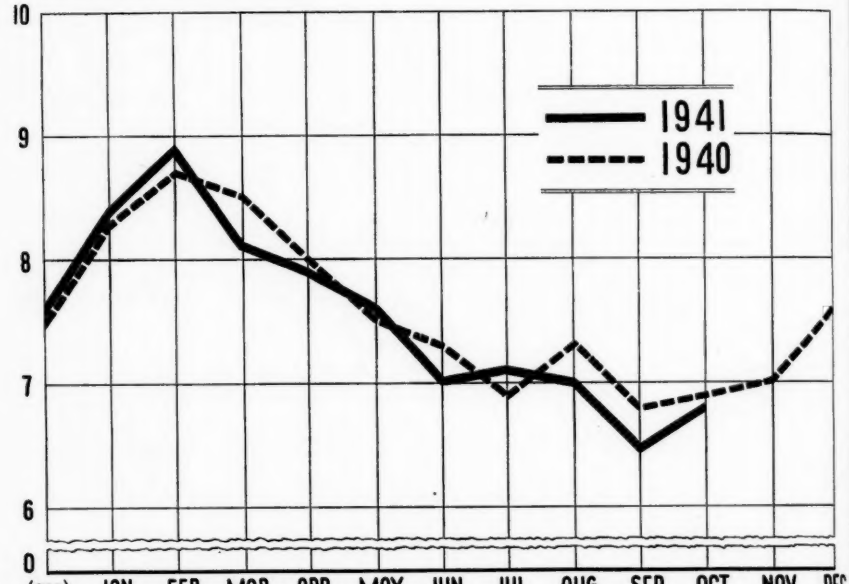
Metropolitan Life Insurance Company,

1 Madison Avenue, New York, N. Y.

MORTALITY FROM ALL CAUSES

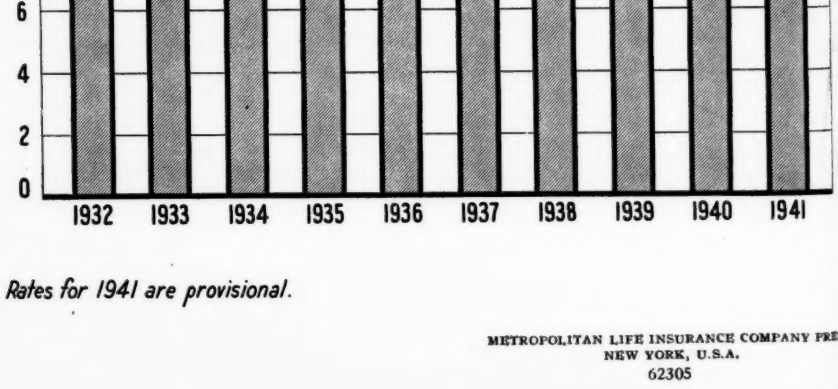
METROPOLITAN LIFE INSURANCE COMPANY
INDUSTRIAL DEPARTMENT, WEEKLY PREMIUM-PAYING BUSINESS

DEATH RATES PER 1,000 · ANNUAL BASIS



(DEC)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
1940	8.3	8.7	8.6	8.0	7.5	7.3	6.9	7.3	6.8	6.9	7.0	7.6
1941	8.4	8.9	8.1	7.9	7.6	7.0	7.1	7.0	6.5	6.8		

DEATH RATES FOR OCTOBER



Rates for 1941 are provisional.

METROPOLITAN LIFE INSURANCE COMPANY PRES
NEW YORK, U.S.A.
62305